CLAIMS

1. A solid electrolyte capacitor comprising a jacketed capacitor element, the capacitor element being obtained by sequentially stacking a dielectric oxide film layer, a semiconductor layer and an electrically conducting layer on a surface of a valve-acting metal sintered body or electrically conducting oxide sintered body connected with an anode lead, wherein the thickness of the semiconductor layer in the vicinity of the anode lead-connection point on the sintered body surface connected with an anode lead is 5 μm or less.

2. The solid electrolyte capacitor as claimed in claim 1, wherein the semiconductor layer is not provided in the vicinity of the anode lead-connection point on the sintered body surface connected with an anode lead.

3. The solid electrolyte capacitor as claimed in claim 1, wherein the thickness of the semiconductor layer in the portion excluding the vicinity of the anode lead-connection point is from 5 to 100 μm.

4. The solid electrolyte ~~capacit~~or as claimed in claim 1, wherein the valve-acting metal or electrically conducting oxide is tantalum, aluminum, niobium, titanium, an alloy mainly comprising such a valve-acting metal, or niobium oxide.

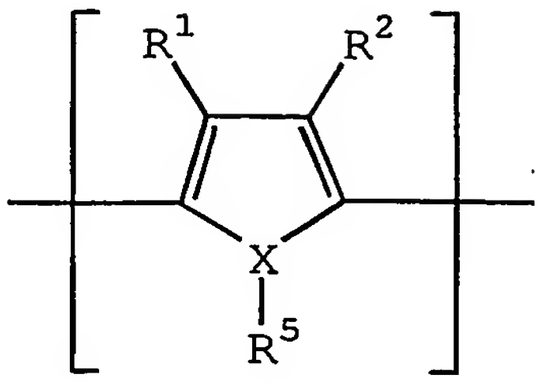
5. The solid electrolyte capacitor as claimed in claim 1,

wherein the valve-acting metal sintered body is a tantalum sintered body having a CV of 100,000 μF·V/g or more.

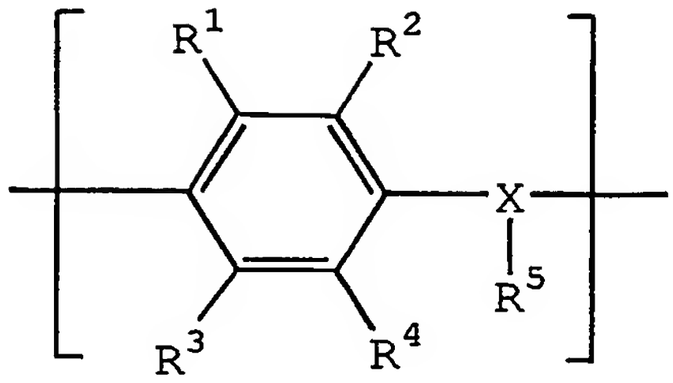
6. The solid electrolyte capacitor as claimed in claim 1, wherein the valve-acting metal sintered body is a niobium sintered body having a CV of 150,000 μF·V/g or more.

7. The solid electrolyte capacitor as claimed in claim 1, wherein the semiconductor layer is at least one member selected from an organic semiconductor layer and an inorganic semiconductor layer.

8. The solid electrolyte capacitor as claimed in claim 7, wherein the organic semiconductor is at least one member selected from the group consisting of an organic semiconductor comprising benzopyrroline tetramer and chloranil, an organic semiconductor mainly comprising tetrathiotetracene, an organic semiconductor mainly comprising tetracyanoquinodimethane, and an organic semiconductor mainly comprising an electrically conducting polymer obtained by doping a dopant to a polymer containing a repeating unit represented by the following formula (1) or (2):



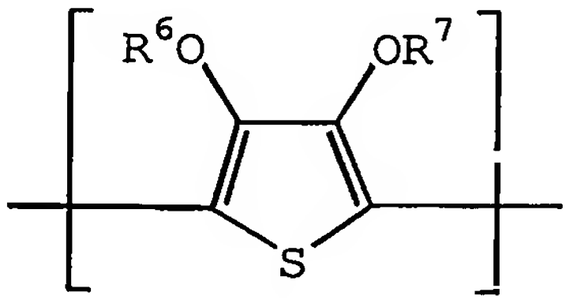
(1)



(2)

wherein R^1 to R^4 each independently represents a hydrogen atom, an alkyl group having from 1 to 6 carbon atoms or an alkoxy group having from 1 to 6 carbon atoms, X represents an oxygen atom, a sulfur atom or a nitrogen atom, R^5 is present only when X is a nitrogen atom, and represents a hydrogen atom or an alkyl group having from 1 to 6 carbon atoms, and each of the pairs R^1 and R^2, and R^3 and R^4 may combine with each other to form a ring.

9. The solid electrolyte capacitor as claimed in claim 8, wherein the electrically conducting polymer containing a repeating unit represented by formula (1) is an electrically conducting polymer containing a structure unit represented by the following formula (3) as a repeating unit:



(3)

wherein R^6 and R^7 each independently represents a hydrogen atom, a linear or branched, saturated or unsaturated alkyl group having from 1 to 6 carbon atoms, or a substituent for

forming at least one 5-, 6- or 7-membered saturated hydrocarbon cyclic structure containing two oxygen elements when the alkyl groups are combined with each other at an arbitrary position, and the cyclic structure includes a structure having a vinylene bond which may be substituted, and a phenylene structure which may be substituted.

10. The solid electrolyte capacitor as claimed in claim 8, wherein the electrically conducting polymer is selected from the group consisting of polyaniline, polyoxyphenylene, polyphenylene sulfide, polythiophene, polyfuran, polypyrrole, polymethylpyrrole, and substitution derivatives and copolymers thereof.

11. The solid electrolyte capacitor as claimed in claim 9 or 10, wherein the electrically conducting polymer is poly(3,4-ethylenedioxythiophene).

12. The solid electrolyte capacitor as claimed in claim 7, wherein the inorganic semiconductor is at least one compound selected from the group consisting of molybdenum dioxide, tungsten dioxide, lead dioxide and manganese dioxide.

13. The solid electrolyte capacitor as claimed in claim 7, wherein the electrical conductivity of the semiconductor is from 10^{-2} to 10^{3} S/cm.

14. An electronic circuit using the solid electrolyte capacitor described in any one of claims 1 to 13.

15. An electronic device using the solid electrolyte capacitor described in any one of claims 1 to 13 above.